

Circular Knife Ø 74 T 1.5 V 30° R 0.05

A24-100

The fully automated production of these circular paper knives allows to produce and resharpen large batches. For each knife the diameter and the thickness is measured. The first operation pregrinds the OD oscillating the wheel with partial increments. The sides are then preground with oscillations. The finishing operations left+radius and right side + radius are executed in 2 passes. The 1V1 grinding wheel thickness is chosen in order to keep permanent contact during oscillations.



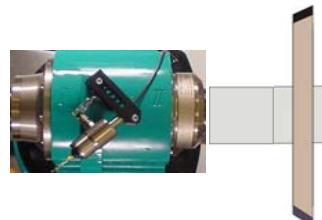
1. Cycletime for Production

Workpiece: Ø 74 mm, Thickness 2 mm, V 30°, R 0.05 Material HSS								
Operations	Probe	dress	pregr. Top	pregr. Left	pregr. Right	fin. Left+Rad	fin. Right+Rad	Load
Feed [mm/Min]	2000	100	500	500	500	500	500	9000
Power [kW]		1	4	3	2	2	2	1
Cutting speed [m/s]		20	36	36	36	36	36	
Used wheels		1	1	1	1	1	1	
Grinding time [s]	18	31	67	67	67	37	37	20
Total cycle time	5 Min 42							

The cycle times are indicative. Material to be ground, grinding wheels, coolants can influence the cycle times considerably.

2. Used Grinding Wheels

1	1V1 Ø175 C80V60°
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3. Machine and Software Requirements

Machines: 5 axes CNC grinders : NORMA CFG
 Control: Fanuc 310i
 Accessories: STL6056, CFG4550 Inner clamping, fix DressDiamond
 Responsible engineer: OP. 2.5.11

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